

REMARKS/ARGUMENTS

Claims 45-55 and 57-71 are pending. Claim 56 has been canceled without prejudice. Claims 45, 55, 60-61, 63-68 and 70-71 have been amended to correct minor informalities. No new matter has been introduced.

Applicants have amended the TITLE to make it more descriptive as requested by the Examiner.

Applicants believe claims 45-71 comply with 35 U.S.C. § 112. For instance, the word "bands" objected to by the Examiner has been removed from all claims and replaced with language clearly supported by the specification as originally filed, in particular techniques for reaction, separation, and detection of analyte described on page 8, line 6 through page 10, line 11 and on page 15, line 29 through page 16, line 21.

Claim 56, which stands rejected under 35 U.S.C. § 112, has been canceled.

Applicants believe the specification and ABSTRACT comply with 35 U.S.C. § 112. For instance, the paragraph starting on page 5, line 4 and ABSTRACT have been amended to remove the words "bands" objected to by the Examiner and to use language clearly supported by the specification as originally filed, in particular page 8, lines 5-7.

Claims 55 and 71 are amended to specify isoelectric focusing rather than its abbreviation IEF.

Claims 45-50, 52-58, 60, and 62-70 were rejected under 35 U.S.C. § 102(e) as anticipated by, or under 35 U.S.C. § 103(a) as unpatentable over, Handique (P/N 6,130,098). Claims 45-50, 52-58, 60, and 62-70 were rejected under 35 U.S.C. § 103(a) as being obvious over Handique (6,130,098) in view of Wilding (P/N 5,587,128), or alternatively, over Wilding in view of Handique.

Applicants request reconsideration of these rejections in view of the following arguments.

Applicants respectfully submit that independent claim 45 is novel and patentable over Handique alone or in combination with Wilding because no combination of these references

teaches a device having at least one valve in the transition region for controlling fluid flow between the reaction chamber and the separation channel.

In Fig. 1, Handique shows a device having a reaction chamber connected to an electrophoresis module, but no valve is shown in the region connecting the reaction chamber to the electrophoresis module. In fact, there are no valves shown in Fig. 1. In Fig. 13, Handique shows a different device having a valve in a side channel connecting to a main channel. This showing of a valve in a side channel in the device of Fig. 13 does not fairly teach or suggest Applicants' device as recited in claim 45. Handique only teaches placing a valve in a side channel in the device of Fig. 13, which lacks many of the other elements of claim 45. There is no showing in Fig. 13, or anywhere else in Handique, of a valve in a transition region for controlling fluid flow between a reaction chamber and a separation channel, as recited in claim 45. Further, the placement of a valve in a side channel of the device of Fig. 13 does not teach or suggest the placing of a valve in the region of the different device of Fig. 1 that connects the reaction chamber to the electrophoresis module.

Moreover, Handique teaches away from placing valves in the device of Fig. 1. In the section of the specification (col. 13, lines 61-66) following the description of Fig. 1, when describing how discrete droplets are created and moved through the device, Handique states: "The present invention contemplates methods, compositions and devices for the creation of microdroplets of discrete (i.e. controlled and predetermined) size. The present invention contemplates the use of selective hydrophobic coatings to develop a liquid-sample injection and motion system that does not require the use of valves (emphasis added)." Thus, Handique fails to teach or suggest that there should be any valves in the device of Fig. 1, much less that there should be a valve in the transition region for controlling fluid flow between the reaction chamber and the separation channel, as explicitly recited in claim 45.

The Wilding reference also fails to teach or suggest a device having a valve in a transition region that connects a reaction chamber to a separation channel. Wilding therefore fails to remedy the shortcomings of Handique in teaching Applicants' device as recited in claim

45. Thus, neither Handique nor any combination of Handique and Wilding anticipates Applicants' invention as recited in claim 45.

Similarly, independent claim 60 recites at least one valve in the transition region and the steps of subjecting the sample to a reaction while the valve remains closed and opening the valve in the transition region to allow injection of a sample plug into the separation region. Neither Handique nor Wilding teach or suggest this. Thus, Handique, Wilding, and a combination of Handique and Wilding do not anticipate or suggest Applicants' invention as recited in claim 60.

For at least the foregoing reasons, independent claims 45 and 60 and claims 46-55, 57-59, and 61-71 depending therefrom are patentable.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is urged.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



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